

Appl. No. 10/657,547
Amdt. dated Oct. 27, 2004
Reply to Office Action of Jul. 27, 2004

AMENDMENTS TO THE CLAIMS

Please replace the previous listing of claims with the following listing of claims.

Listing of Claims

1. (Previously Presented) A vehicle, comprising:
a door frame;
a door mounted in said door frame and arranged to move in a lateral direction alongside said door frame;
an infinite door check mechanism for enabling said door to be moved from a closed position in said door frame to any one of a plurality of different laterally open positions in which the space between a lateral edge of said door and an edge of said door frame against which said lateral edge of said door is positioned when said door is situated in said door frame is varied;
a motor coupled to said door and arranged to move said door from the closed position to any of the open positions;
detecting means for detecting resistance to opening movement of said door; and
a processor coupled to said detecting means and said motor for receiving the detected resistance to the opening movement of said door and directing said motor to stop the opening movement of said door when the detected resistance is above a threshold.
2. (Original) The vehicle of claim 1, wherein said detecting means are arranged in connection with said motor.
3. (Original) The vehicle of claim 2, wherein said detecting means are arranged to detect torque on said motor.
4. (Currently Amended) The vehicle of claim 1, wherein said detecting means comprise a pressure sensor arranged on ~~the~~ said door and having a pressure sensitive surface oriented in the direction in which said door moves laterally during the opening movement of said door.
5. (Previously Presented) A method for enabling a door to be opened to any one of a plurality of different positions, comprising the steps of:
mounting the door in a door frame such that the door moves in a lateral direction alongside the door frame during an opening movement of the door;

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coupling a motor to the door;

actuating the motor to move the door from a closed position in the door frame into any one of a plurality of different laterally open positions in which the space between a lateral edge of the door and an edge of the door frame against which the lateral edge of the door is positioned when the door is situated in the door frame is varied;

detecting resistance to the opening movement of the door;

upon detecting resistance to the opening movement of the door, analyzing the detected resistance comparing it to a threshold; and

when the detected resistance is above a threshold, directing the motor to stop the opening movement of the door.

6. (Original) The method of claim 5, wherein the step of detecting the resistance to opening movement of the door comprises the step of arranging a sensor in connection with the motor.

7. (Original) The method of claim 6, wherein the sensor is arranged to measure torque on the motor.

8. (Previously Presented) The method of claim 5, wherein the step of detecting the resistance to opening movement of the door comprises the steps of arranging a pressure sensor on the door and providing the pressure sensor with a pressure sensitive surface oriented in the direction in which the door moves laterally during the opening movement of the door.

9. (Currently Amended) A method for controlling a motorized door of a vehicle to allow for non-motorized operation, comprising the steps of:

coupling a motor to the door;

monitoring the torque on the motor ~~or force or torque exerted on the door~~ during an opening and closing movement of the door; and

de-coupling the motor from the door when the torque ~~or force~~ is above a threshold such that the motor is disengaged from the door and the door is movable without causing damage to the motor.

10. (Previously Presented) The method of claim 9, further comprising the steps of:
monitoring the velocity of the door; and

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re-coupling the motor with the door when the velocity of the door is zero such that the motor is re-engaged with the door.

11-13. (Canceled)

14. (Currently Amended) An apparatus for controlling a motorized door of a vehicle to allow for non-motorized operation, comprising:

a motor releasably coupled to the door for opening and closing the door;

a torque sensor ~~for measuring~~ arranged to measure the torque on the motor, ~~torque or force on the door~~ during an opening and closing movement of the door; and

a processor coupled to said torque sensor and said motor for analyzing the measured torque or force on the motor or door relative to a threshold and de-coupling said motor from the door when the torque or force is above a threshold such that said motor is disengaged from the door and the door is movable without causing damage to said motor.

15-17. (Canceled)

18. (Previously Presented) A method for controlling opening and closing of a vehicle door, comprising the steps of:

detecting the presence of an individual authorized to open the door and enter the vehicle, said detecting step comprising the step of arranging a sensor on the vehicle to cause a radio frequency identification device (RFID) to emit a signal back to the sensor with the signal emission being indicative of the presence of the authorized individual;

generating a signal upon the detection of the presence of an authorized individual or an object possessed by the authorized individual; and

actuating a motor upon receipt of the signal to open or close the door.

19. (Previously Presented) An apparatus for controlling opening and closing of a vehicle door, comprising:

a sensor for detecting the presence of an individual authorized to open the door and enter the vehicle, said sensor being arranged to generate a signal upon the detection of the presence of an authorized individual or an object possessed by the authorized individual, said sensor being structured

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and arranged to cause a radio frequency identification device (RFID) to emit a signal back to said sensor with the signal emission being indicative of the presence of the authorized individual; and

a motor coupled to said sensor and the door and arranged to open or close the door upon receipt of the signal from said sensor.

20. (Previously Presented) The vehicle of claim 1, wherein said detecting means are arranged to detect resistance to the opening movement of said door during movement of said door in the lateral direction.

21. (Previously Presented) The method of claim 5, wherein resistance to the opening movement of the door during movement of the door in the lateral direction is detected.

22. (Previously Presented) A vehicle, comprising:
a door frame;
a door mounted in said door frame;
an infinite door check mechanism for enabling said door to be moved from a closed position in said door frame to any one of a plurality of different open positions;
a motor coupled to said door and arranged to move said door from the closed position to any of the open positions;
detecting means for detecting resistance to opening movement of said door; and
a processor coupled to said detecting means and said motor for receiving the detected resistance to the opening movement of said door and directing said motor to stop the opening movement of said door when the detected resistance is above a threshold,
said detecting means comprising a pressure sensor arranged on the door and having a pressure sensitive surface oriented in the direction of opening of said door such that by touching said pressure sensitive surface, resistance is applied to said door causing the opening movement of said door to be stopped.

23. (Previously Presented) A method for enabling a door to be opened to any one of a plurality of different positions, comprising the steps of:

coupling a motor to the door;
actuating the motor to move the door from a closed position into an open position;

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detecting resistance to opening movement of the door;

upon detecting resistance to the opening movement of the door, analyzing the detected resistance comparing it to a threshold; and

when the detected resistance is above a threshold, directing the motor to stop the opening movement of the door,

the step of detecting the resistance to opening movement of the door comprising the steps of arranging a pressure sensor on the door and providing the pressure sensor with a pressure sensitive surface oriented in the direction of opening of the door such that by touching the pressure sensitive surface, resistance is applied to the door causing the opening movement of the door to be stopped.